WORLD MITOCHONDRIA SOCIETY

10th Anniversary of

TARGETING MITOCHONDRIA CONGRESS

SCIENTIFIC AGENDA

OCTOBER 27-29, 2019 - BERLIN, GERMANY

www.targeting-mitochondria.com
Dear Colleagues and Friends,

I am excited and honored to announce on behalf of the Scientific Committee of the World Mitochondria Society, “The 10th Anniversary World Congress on Targeting Mitochondria”, which will be held in Berlin, Germany, on October 28-29, 2019.

The overarching themes of our 10th Anniversary World Congress on Targeting Mitochondria will not significantly deviate from topics discussed at preceding editions of our conference series. Again, we will focus on three major areas, which are first the role of mitochondrial dysfunction in etiology and pathogenesis of chronic diseases including aging, secondly how to assess and above all quantify mitochondrial dysfunction in vitro and in vivo and finally, thirdly, how to target and manipulate mitochondrial function in order to develop future mitochondria-based therapies.

Further, in continuation of last year’s successful conference, we will invite speakers to focus on the cross-talk between mitochondria and microbiota as well as on mitochondrial dynamics in health and disease. Also we will focus on intracellular stress pathways involving mitochondrial dysfunction and cell death.

For the 10th edition of “Targeting Mitochondria”, the scientific committee will invite again key players in Mitochondrial Medicine, i.e. investigators who have been pushing the progress in their particular field of mitochondrial research over the last few years. Basic researchers working at the bench in the laboratory, physicians treating patients suffering from mitochondrial disorders as well as representatives of companies working on the commercialization of mitochondria-targeted therapies are all welcome to our conference. We strongly believe that our jubilee World Congress on Targeting Mitochondria will be at least as exciting and successful as majority of our previous meetings.

As always, we look forward to seeing you very much in Berlin for this exciting event.

Prof. Volkmar Weissig
President of the World Mitochondria Society
Midwestern University, USA
10th World Congress on Targeting Mitochondria
October 28-29, 2019 – InterContinental Hotel, Berlin, Germany

Scientific Agenda

Sunday October 27, 2019

17h00 – 18h00 Registration & material delivery

Monday October 28, 2019

7h45 Registration & material delivery

8h20 Introduction of Targeting Mitochondria
Prof. Volkmar Weissig, President of World Society Mitochondria

8h30 Honorary Lecture: Mitochondrial genetics and Human Disease
Douglas C. Wallace, Center for Mitochondrial and Epigenomic Medicine, USA

Session 1: Recent advances on mitochondrial dysfunctions and dynamics in chronic diseases: The mechanistic

8h55 Selective Segregation of Mitochondria in Asymmetric Stem Cell Divisions
Pekka Katajisto, Center of Excellence in Stem Cell Metabolism, Finland

9h15 Cardiac Glycosides Modulate Neuroblastoma Stem Cell Survival by Dysfunctional Mitophagy
Marc Diederich, Seoul National University, South Korea

9h35 Mitochondria, as Central Regulators of Neural Stem Cell Fate
Ruth Slacks, University of Ottawa, Canada

9h55 The brain MITOxy Project: From Mitochondria to Proteases and Reactive Species Interactome in Brain
Laurent Chatre, Universite de caen-Normandie, CEA, France

10h15 Increased Hydrogen Peroxide and Decreased Glutathione Redox Potential May Cause Dopaminergic Neurodegeneration in Parkin Loss-of-Function
Lori M. Buhlman, Midwestern University, USA

10h35 Coffee Break & Poster Session

11h20 The Challenge of Qualitative and Quantitative Assessment of Mitochondrial Function in Vitro And in Vivo: What We Know in 2019?
Egbert Mik, University Medical Center Rotterdam, The Netherlands

11h40 Mitochondria & Microbiota Inter-talk: Gut Microbiota influence Mitochondria activity in patients
Marvin Edeas, University Paris Descartes, INSERM U1016, France

12h00 Host Mitochondria Influence Gut Microbiome Diversity: A Role For ROS
Tal Yardeni, Children’s Hospital of Philadelphia, USA

Short oral presentations (7 minutes for presentation + 3 minutes for questions)

The ESRE Network: A Conserved Master Stress Response that Surveils Mitochondrial Damage
Natasha Kirienko, Rice University, USA

12h30 Lunch Break, Networking & Poster Session

14h00 T-Cell Metabolism and Mitochondrial Function
Alessia Angelin, Children’s Hospital of Philadelphia, USA
14h20 The Cellular Stress Protein MNRR1/CHCHD2 and Mitochondrial Disease  
Lawrence Grossman, Wayne State University, USA

14h40 Mitochondrial Copper Toxicity with a Focus on Wilson Disease  
Hans Zischka, Institute of Molecular Toxicology and Pharmacology, Germany

15h00 Roles for Mitochondrial Dysfunction in Alzheimer's Disease  
Benedict C. Albensi, Max Rady College of Medicine - University of Manitoba, Canada

15h20 Coffee Break, Networking & Poster Session

16:00 Short oral presentations of Sessions 1 (7 minutes for presentation + 3 minutes for questions)

Role of Mitochondria in Regulation of Insulin and Glucagon Secretion  
Marko Marhl, University of Maribor, Slovenia

Activation of Respiratory Chain Complexes by Unique Mitochondrial Ribosomes during Stem Cell Differentiation  
Yan Qin, Chinese Academy of Sciences, China

Mitochondrial Dysfunction and Insulin Resistance Induced by Endotoxin was Restored by GPR120 Agonist, TUG-891 in Brown Adipocytes  
Farah Omran, University of Warwick, United Kingdom

Whole Exome Sequencing of Chagas Disease Cardiomyopathy Families Reveals Accumulation of Rare Variants in Mitochondrial and Inflammation-Associated Genes  
Edecio Cunha-Neto, University of São Paulo School of Medicine, Brazil

The Role of Mitochondrial DNA During Chondrogenesis using Human Mesenchymal Stem Cell without MTDNA (RHO-0)  
Mercedes Fernandez-Moreno, Institute for Biomedical Research INIBIC, Spain

Adenosine Triphosphate (ATP) Synthesis by Endogenous UV Radiation  
Thomas Valentine Prevenslik, QED Radiations, Germany

18h30 End of the first day

20h30 Targeting Mitochondria Dinner  
Appointment in the lobby of the hotel. If you would like to participate, please register online or contact the staff on site.
Tuesday October 29, 2019

Symposium:
**Actin(g) on mitochondria:**
The role of actin-regulating proteins on mitochondria in health and disease

08h30 Introduction: Role of Actin-regulating Proteins on Mitochondria
*Carsten Culmsee, Marburg, Germany*

- Cofilin Dependent Mitochondrial Dysfunction Following Hemorrhagic Brain Injury and Neuroinflammation
  *Zahoor Shah, Toledo, USA*

- Mitochondrial Functions of The Actin-Regulatory Protein Cofilin1
  *Marco Rust, Marburg, Germany*

- Knock-down of ADF/Cofilin in C. Elegans - Effects on Mitochondrial Function
  *Gunter Eckart, Gießen, Germany*

- Mitochondrial Parameters in Cardiomyocytes in Health and Disease
  *Christoph Maack, Würzburg, Germany*

- Mitochondrial Calcium Regulation in Hypertensive Heart Disease
  *Jelena Plakic, Marburg, Germany*

- Mitochondrial Alterations in Heart Failure
  *Susanne Rohrbach, Gießen Germany*

- Blocking Mitochondria-targeted Ferroptosis Prevents Cardiomyopathy
  *Fudi Wang, University School of Medicine, Hangzhou, China*

10h30 Coffee Break, Networking & Poster Session

**Session 2: Mitochondria & Skin: Recent Advances**

11h15 Role of PGC-1S in Human Epidermal Physiology
*Sibylle Jäger, L’Oréal Research & Innovation, France*

11h35 Cannabinoids and Skin: The "C(ut)annabinoid" System as a Novel Player in Regulating Cutaneous Mitochondrial Biology
*Attila Oláh, University of Debrecen, Hungary*

11h55 Mitochondria and Skin: Mitochondria in Wound Healing
*Jakob Wikström, Karolinska University Hospital, Sweden*

12h15 Short oral presentations (7 minutes for presentation + 3 minutes for questions)

12h30 Lunch Break, Networking & Poster Session

**Session 3: Mitochondria Innovations 2019**

Strategies to target mitochondria: Clinical trials and potential mitochondria-based therapies

13h30 Mitochondrial Antioxidant Therapy for Treating Vascular Aging
*Douglas R Seals, University of Colorado Boulder, USA*

13h50 2,4-Dinitrophenol as Medicine
*John G. Geisler, Mitochon Pharmaceuticals, Inc, USA*

14h10 Mitochondria-Targeted Low-Molecular Weight Compounds for Probing Mitochondrial Functions
*Richard C. Hartley, University of Glasgow, United Kingdom*
14h30 Mitochondrial Transplantation - From Animal Studies to Clinical Relevance
James D. McCully, Harvard Medical School, Boston Children's Hospital, USA

14h50 Short oral presentations (7 minutes for presentation + 3 minutes for questions)

Mitochondria-Targeted Therapeutics for Alzheimer’s Disease
Eugenia Trushina, Mayo Clinic, USA

Precise IntraMitochondrial Delivery of PT(LV) Anticancer Complexes for Enhanced Anticancer Activity and Reduced Nephrotoxicity
Giorgia Pastorin, National University of Singapore, Singapore

15h30 Coffee Break, Networking & Poster Session

16h00 Stem Cell-driven Drug Discovery of OXPHOS Diseases
Alessandro Prigione, Max Delbrueck Center for Molecular Medicine, German

16h20 Mitochondria-Targeted Nanocarriers for Mitochondrial Therapies
Shanta Dhar, University of Miami, USA

16h40 Short oral presentations (7 minutes for presentation + 3 minutes for questions)

Therapeutic Application of Specific Near-Infrared Light Wavelengths that Inhibit Cytochrome C Oxidase Results in Robust Neuroprotection
Maik Hüttemann, Wayne State University, USA

Targeting Mitochondrial Complex I for fighting Diabetess
Liang-Jun Yan, University of North Texas Health Science Center, USA

17h50 Discussion & Concluding Remarks with Chairpersons & Scientific Committee

Targeting Mitochondria 2019 Awards

18h00 End of Targeting Mitochondria 2019

Round Table Discussion: The Unanswered Questions
Despite the wealth of data typically presented, many questions of the participants remain unanswered, and for many scientists, even those who have been considered as keynote speakers, there is only limited opportunity to interact with colleagues. To facilitate the scientific discourse and make the conference more interactive, the scientific committee has decided to include a round table discussions that address hot topics, challenges and pressing questions related to various areas of Mitochondria medicine and research.

All participants are invited to participate in these discussions by sending their questions and thoughts before the meeting by the September 30, 2019.

Submit your Best Mitochondria Image for selection
For our 10th anniversary, the World Mitochondria Society has launched a call for selecting YOUR BEST Mitochondria IMAGE.

Submit a memorable Mitochondria image you’ve taken this past year and be entered into a drawing for 3 prizes:

First place: 2 nights hotel and free registration at Targeting Mitochondria
Second place: Free Registration
Third place: One Dinner

Entries must be original. We also accept all Art works and drawing related to Mitochondria (life, death, energy, dynamics and philosophy...)

By submitting your image and caption, you give the WMS permission to include your image (with proper credit being given) into our 2nd edition of MIMB “Mitochondrial Medicine”.

To submit, please send us your Mitochondria image + Name and Affiliation to mitochondria(at)targeting-mitochondria.com